Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Previously Presented) An image forming apparatus comprising:

a pressing roller for pressing a sheet at the time of a fixing operation;

a fixing roller having a hollow portion, facing said pressing roller, rising in temperature by being heated, and fixing a developer to the sheet by sandwiching the sheet between said fixing roller and said pressing roller;

induction heating coils including a center-section coil and an end-section coil, and arranged inside said fixing roller in an axial direction so as to leave a space between the center-section coil and the end-section coil, the space being adjusted so that the temperature of one surface of said fixing roller, said one surface opposing the space, is not higher than the temperatures of the other surface of said fixing roller, said other surface opposing central portions of the coils; and

overheating prevention devices for monitoring an abnormally overheated condition of said fixing roller, and for breaking a circuit with said fixing roller so as to turn-off power applied to the two coils at the time of the occurrence of the abnormally overheated condition in which the temperature of the one surface of said fixing roller is more than a predetermined temperature, said overheating prevention devices being provided so as to oppose the center-section coil and the end-section coil, but not to oppose the space between the center- and end-section coils.

3. (Previously Presented) The image forming apparatus according to claim 2, wherein either the center-section coil and the end-section coil are simultaneously or alternately turned on and heated, or only one of them is turned on and heated.

4. (Previously Presented) The image forming apparatus according to claim 2, further comprising a heating control section for independently controlling the turn-on or turn off of the power to the center-section coil and the end-section coil.

5. (Previously Presented) The image forming apparatus according to claim 4, wherein said heating control section includes a main coil heating control section for controlling the turn-on or turn-off of the power to the center-section coil, and a sub coil heating control section for controlling the turn-on or turn-off of the power to the end-section coil.

6. (Original) The image forming apparatus according to claim 4, further comprising:

temperature monitor detecting the surface temperature of said fixing roller being heated by the center-section coil and the end-section coil; and

switch controller controlling said heating control section based on an output from said temperature monitor such that the temperature of said fixing roller becomes suitable for carrying out a fixing operation by simultaneously or alternately turning on the center-section coil and the end-section coil.

7. (Original) The image forming apparatus according to claim 2, wherein said overheating prevention devices are thermostats or thermal fuses for automatically breaking the circuit at the time of an abnormal overheating condition.

8. (Original) The image forming apparatus according to claim 6, wherein said temperature monitor is a first thermistor for detecting the surface temperature of the central portion of said fixing roller and a second thermistor for detecting the surface temperature of one end portion of said fixing roller.

9. (Original) The image forming apparatus according to claim 8, wherein the heating control of the center-section coil is performed based on an output of the first

thermistor, and the heating control of the end-section coil is performed based on an output of the second thermistor.

10. (Original) The image forming apparatus according to claim 3, which is capable of selecting the case where either of the center-section coil or the end-section coil is continuously heated and the case where both of the center-section coil and the end-section coil are heated at a constant duty ratio, in a warming-up mode, a standby/idle mode, and a printing mode.

11. (Previously Presented) The image forming apparatus according to claim 2, wherein the end-section coil comprises a first coil and a second coil, which are provided at one end and the other end of the center-section coil, respectively.

12. (Previously Presented) An image forming apparatus comprising:

a pressing roller for pressing a sheet at the time of a fixing operation;

a fixing roller having a hollow portion, facing said pressing roller, rising in temperature by being heated, and fixing a developer to the sheet by sandwiching the sheet between said fixing roller and said pressing roller;

induction heating coils including a center-section coil and an end-section coil, and arranged inside said fixing roller in an axial direction so as to leave a space between the center-section coil and the end-section coil, the space being adjusted so that the surface temperature of one surface of said fixing roller, said one surface opposing the space, is not higher than the temperatures of the other surface of said fixing roller, said other surface opposing central portions of the coils in the case where either of the center-section coil or the end-section coil is continuously heated and in the case where both of the center-section coil and the end-section coil are heated at a constant duty ratio, in a warming-up mode, a standby/idle mode, and a printing mode;

a first thermistor for detecting the surface temperature of the central portion of said fixing roller;

a second thermistor for detecting the surface temperature of the end portion of said fixing roller;

a heating control section for controlling turn-on or turn-off of power applied to the center-section coil and the end-section coil based on outputs of the first thermistor and the second thermistor; and

overheating prevention devices for monitoring an abnormally overheated condition of said fixing roller, and for breaking a circuit with said fixing roller so as to turn-off the power to the two coils at the time of the occurrence of the abnormally overheated condition in which the temperature of the one surface of said fixing roller is more than a predetermined temperature, said overheating prevention devices being provided so as to oppose central portions of the center-section coil and the end-section coil, but not to oppose the space between the center- and end-section coils.

13. (Previously Presented) The image forming apparatus according to claim 11, wherein said first coil and said second coil are connected in series.

14. (Previously Presented) A method of forming an image with an image forming apparatus, comprising:

sandwiching a sheet between a fixing roller and a pressing roller;

induction heating the fixing roller with a center-section coil and an end-section coil, said center-section coil and said end-section coil being alternately turned on, the center-section coil and the end-section coil being arranged inside the fixing roller in an axial direction so as to leave a space between the center-section coil and the end-section coil; and

turning off power applied to the coils when an overheated condition occurs in which the temperature of a first surface of the fixing roller opposing the space is more than a predetermined temperature,

wherein the space is configured such that the temperature of the first surface of the fixing roller opposing the space is not higher than the temperature of a second surface that opposes a central portion of the coils.

15. (Canceled)

16. (Canceled)

17. (Previously Presented) An image forming apparatus comprising:

means for sandwiching a sheet between a fixing roller and a pressing roller;

means for induction heating the fixing roller; and

means for turning off power applied to the coils when an overheated condition occurs in which the temperature of a first surface of the fixing roller is more than a predetermined temperature,

wherein the means for induction heating includes a center-section coil and an end-section coil, said center-section coil and said end-section coil being alternately turned on, and

wherein the means for induction heating is arranged inside the fixing roller in an axial direction so as to leave a space between the center-section coil and the end-section coil.

18. (Previously Presented) The image forming apparatus according to claim 17, wherein the space is configured such that the temperature of the first surface of the fixing roller is not higher than the temperature of a second surface that opposes a central portion of the coils.

19. (Previously Presented) An image forming apparatus comprising:

a pressing roller which presses a sheet at the time of a fixing operation;

a fixing roller which has a hollow portion, faces said pressing roller, rises in temperature by being heated, and fixes a developer to the sheet by sandwiching the sheet between said fixing roller and said pressing roller;

induction heating coils which includes a center-section coil and an end-section coil, said center-section coil and said end-section coil being alternately turned on, and arranged inside said fixing roller in an axial direction so as to leave a space between the center-section coil and the end-section coil, the space being adjusted so that the temperature of one surface of said fixing roller, said one surface opposing the space, is not higher than the temperatures

of the other surface of said fixing roller, said other surface opposing central portions of the coils; and

overheating prevention devices which monitor an abnormally overheated condition of said fixing roller, and which break a circuit with said fixing roller so as to turn-off power applied to the two coils at the time of the occurrence of the abnormally overheated condition in which the temperature of the one surface of said fixing roller is more than a predetermined temperature, said overheating prevention devices being provided so as to oppose the center-section coil and the end-section coil, but not to oppose the space between the center- and end-section coils.

20. (Previously Presented) The image forming apparatus according to claim 19, wherein either the center-section coil and the end-section coil are simultaneously or alternately turned on and heated, or only one of them is turned on and heated.

21. (Previously Presented) The image forming apparatus according to claim 19, further comprising a heating control section which independently controls the turn-on or turn off of the power to the center-section coil and the end-section coil.

22. (Previously Presented) The image forming apparatus according to claim 21, wherein said heating control section includes a main coil heating control section for controlling the turn-on or turn-off of the power to the center-section coil, and a sub coil heating control section for controlling the turn-on or turn-off the power to the end-section coil.

23. (Previously Presented) The image forming apparatus according to claim 21, further comprising:

temperature monitor which detects the surface temperature of said fixing roller being heated by the center-section coil and the end-section coil; and

switch controller which controls said heating control section based on an output from said temperature monitor such that the temperature of said fixing roller becomes suitable for

carrying out a fixing operation by simultaneously or alternately turning on the center-section coil and the end-section coil.

24. (Previously Presented) The image forming apparatus according to claim 19, wherein said overheating prevention devices are thermostats or thermal fuses which automatically break the circuit at the time of an abnormal overheating condition.

25. (Previously Presented) The image forming apparatus according to claim 23, wherein said temperature monitor is a first thermistor which detects the surface temperature of the central portion of said fixing roller and a second thermistor which detects the surface temperature of one end portion of said fixing roller.

26. (Previously Presented) The image forming apparatus according to claim 25, wherein the heating control of the center-section coil is performed based on an output of the first thermistor, and the heating control of the end-section coil is performed based on an output of the second thermistor.

27. (Previously Presented) The image forming apparatus according to claim 20, which is capable of selecting the case where either of the center-section coil or the end-section coil is continuously heated and the case where both of the center-section coil and the end-section coil are heated at a constant duty ratio, in a warming-up mode, a standby/idle mode, and a printing mode.

28. (Previously Presented) The image forming apparatus according to claim 19, wherein the end-section coil comprises a first coil and a second coil, which are provided at one end and the other end of the center-section coil, respectively.

29. (Canceled)

30. (Previously Presented) The image forming apparatus according to claim 28, wherein said first coil and said second coil are connected in series.

31. (Currently Amended) The image forming apparatus according to claim 2, wherein the distance of the center-section coil and the end-section coil is ~~1 to 2 mm~~ 10 to 20 mm.

32. (Currently Amended) The image forming apparatus according to claim 12, wherein the distance of the center-section coil and the end-section coil is ~~1 to 2 mm~~ 10 to 20 mm.

33. (Currently Amended) The image forming apparatus according to claim 19, wherein the distance of the center-section coil and the end-section coil is ~~1 to 2 mm~~ 10 to 20 mm.